

AMENDMENTS TO THE CLAIMS:

The listing of claims below will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently Amended) Data transmission process, characterised in that:

a) at transmission:

- the data to be transmitted is divided into N data blocks (B_1, B_2, \dots, B_N),
- these N blocks are processed in parallel in N M-ary orthogonal keying (MOK)

modulation channels, each modulation using a group of spread codes, each channel ~~emitting~~outputting a signal (S_1, S_2, \dots, S_N),

- ~~all these signals (S) are transmitted in series~~ the N spread signals output by said

N M-ary orthogonal keying modulation channels are combined in a combining circuit,

and

- the signal output by said combining circuit is transmitted,

b) at reception:

- the signal received (R) is processed in N M-ary orthogonal keying (MOK)

demodulation channels, giving N data blocks (B_1, B_2, \dots, B_N),

- said N data blocks are grouped together in series to reproduce the transmitted

data.

2. (Currently Amended) Process according to claim 1, wherein the modulation and demodulation ~~consist~~are comprised of M-ary bi-orthogonal keying (MBOK) modulation and demodulation.

3. (Currently Amended) Process according to claim 1, wherein the modulation and demodulation ~~consist~~are comprised of M-ary orthogonal keying (MOK) modulation and demodulation combined with phase shift keying (PSK) modulation and demodulation.

4. (Currently Amended) Process according to claim 3, wherein the phase shift keying modulation and demodulation ~~consist~~are comprised of differential phase shift keying (DPSK) modulation and demodulation.

5. (Currently Amended) Process according to Claim 1, wherein the number of spread codes is the same in each group.

6. (Currently Amended) Process according to Claim 1, wherein the spread codes used are all different from one group to another and the code numbers are equal to powers of 2.

7. (Currently Amended) Process according to to Claim 1, wherein certain spread codes are used in several groups.

8. (Currently Amended) Transmitter for the implementation of the transmission phase of the process according to claim 1, characterised in that it comprises:

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- means to divide the data to be transmitted into N data blocks (B_1, B_2, \dots, B_N),
 - means to process these N blocks in parallel in N M-ary orthogonal keying (MOK) modulation channels, each modulation using a group of spread codes, each channel emitting a signal (S_1, S_2, \dots, S_N), and
 - ~~means to transmit these N signals in series~~ a combining circuit to combine the N spread signals output by said N M-ary orthogonal keying modulation channels,
 - means to transmit the signal output by said combining circuit.

9. (Currently Amended) Transmitter according to claim 8, wherein the modulation iscomprises an M-ary bi-orthogonal keying (MBOK) modulation.

10. (Currently Amended) Transmitter according to claim 8, wherein the modulation iscomprises an M-ary orthogonal keying (MOK) modulation combined with a phase shift keying (PSK) modulation.

11. (Currently Amended) Transmitter according to claim 10, wherein the phase shift keying modulation iscomprises a differential phase shift keying (DPSK) modulation.

12. (Currently Amended) Receiver for the implementation of the reception phase of the process according to claim 1, characterised in that it comprises:

- means to process the signal received (R) in parallel in N M-ary orthogonal keying (MOK) demodulation channels, giving N data blocks (B_1, B_2, \dots, B_N), and
- means to group these N data blocks together in series and reproduce the transmitted data.

13. (Currently Amended) Receiver according to claim 12, wherein the demodulation iscomprises an M-ary bi-orthogonal keying (MBOK) demodulation.

14. (Currently Amended) Receiver according to claim 12, wherein the demodulation iscomprises an M-ary orthogonal keying (MOK) demodulation combined with a phase shift keying (PSK) demodulation.

15. (Currently Amended) Receiver according to claim 14, wherein the phase shift keying demodulation iscomprises a differential phase shift keying (DPSK) demodulation.

16. (Previously Presented) Process according to Claim 4, wherein the number of spread codes is the same in each group.

17. (Previously Presented) Process according to Claim 5, wherein the spread codes used are all different from one group to another and the code numbers are equal to powers of 2.

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18. (New) Process according to claim 1, wherein, at reception, the signal received (R) is processed in a group of P filters ($11_1, 11_2, \dots, 11_P$) distributed in N groups of filters, these filters being adapted to the spread code of the different groups of spread codes used at transmission.

19. (New) Receiver according to claim 12, comprising P filters distributed in N groups of filters, these filters being adapted to the spread code of the different groups of spread codes used at transmission.
